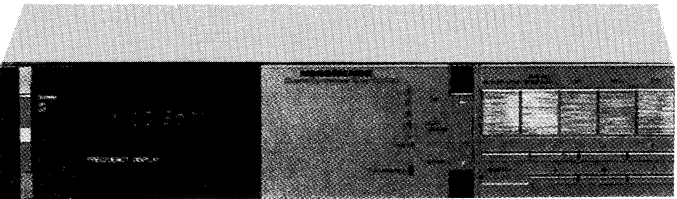
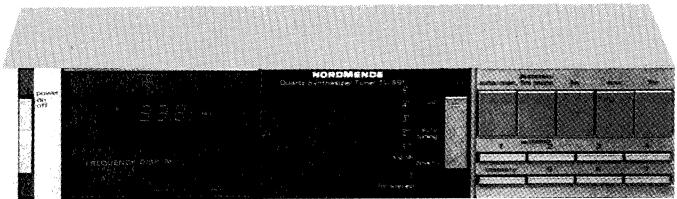


# TECHNISCHER KUNDENDIENST

## Service-Information



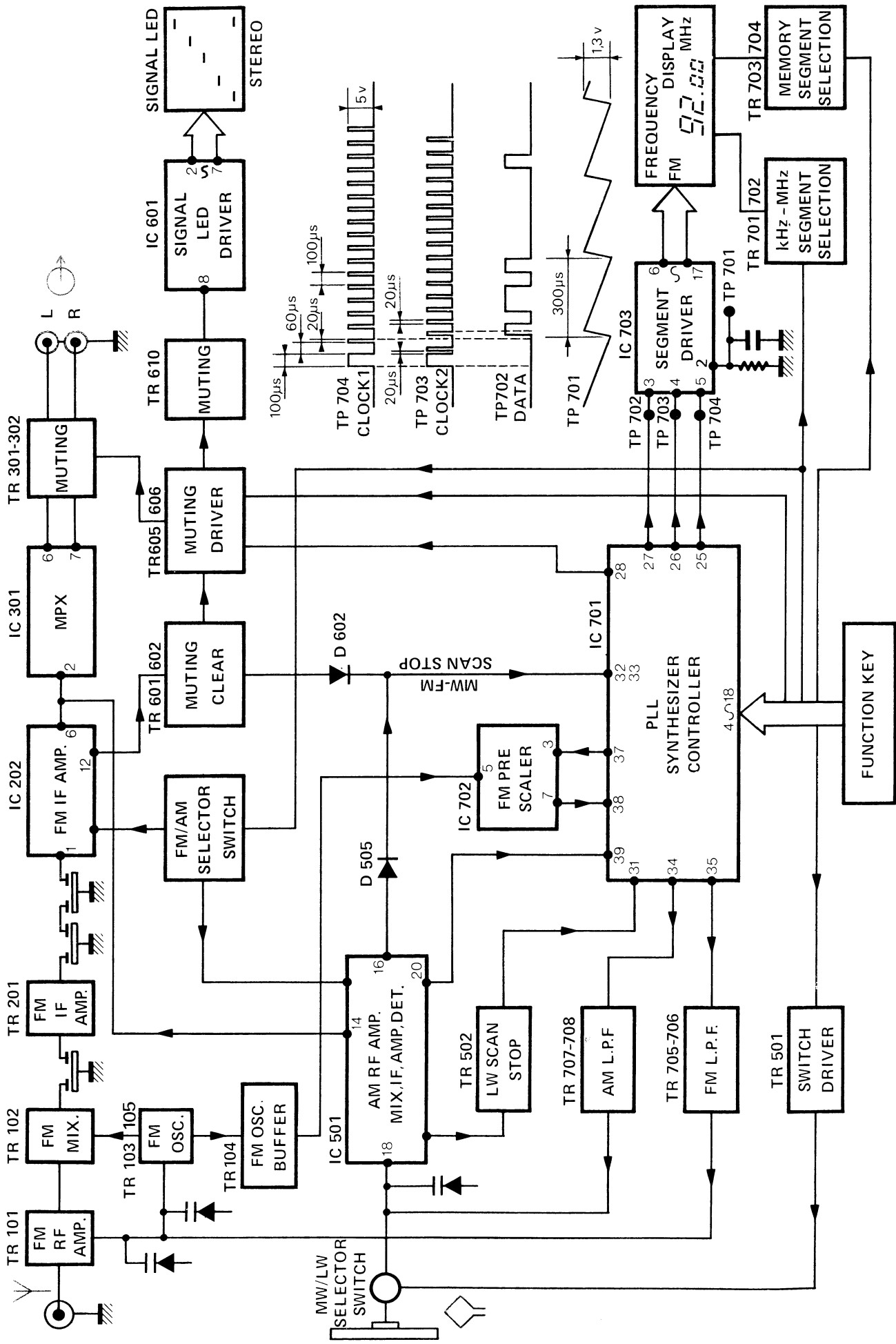
**Tuner TU 990 984.152 H**

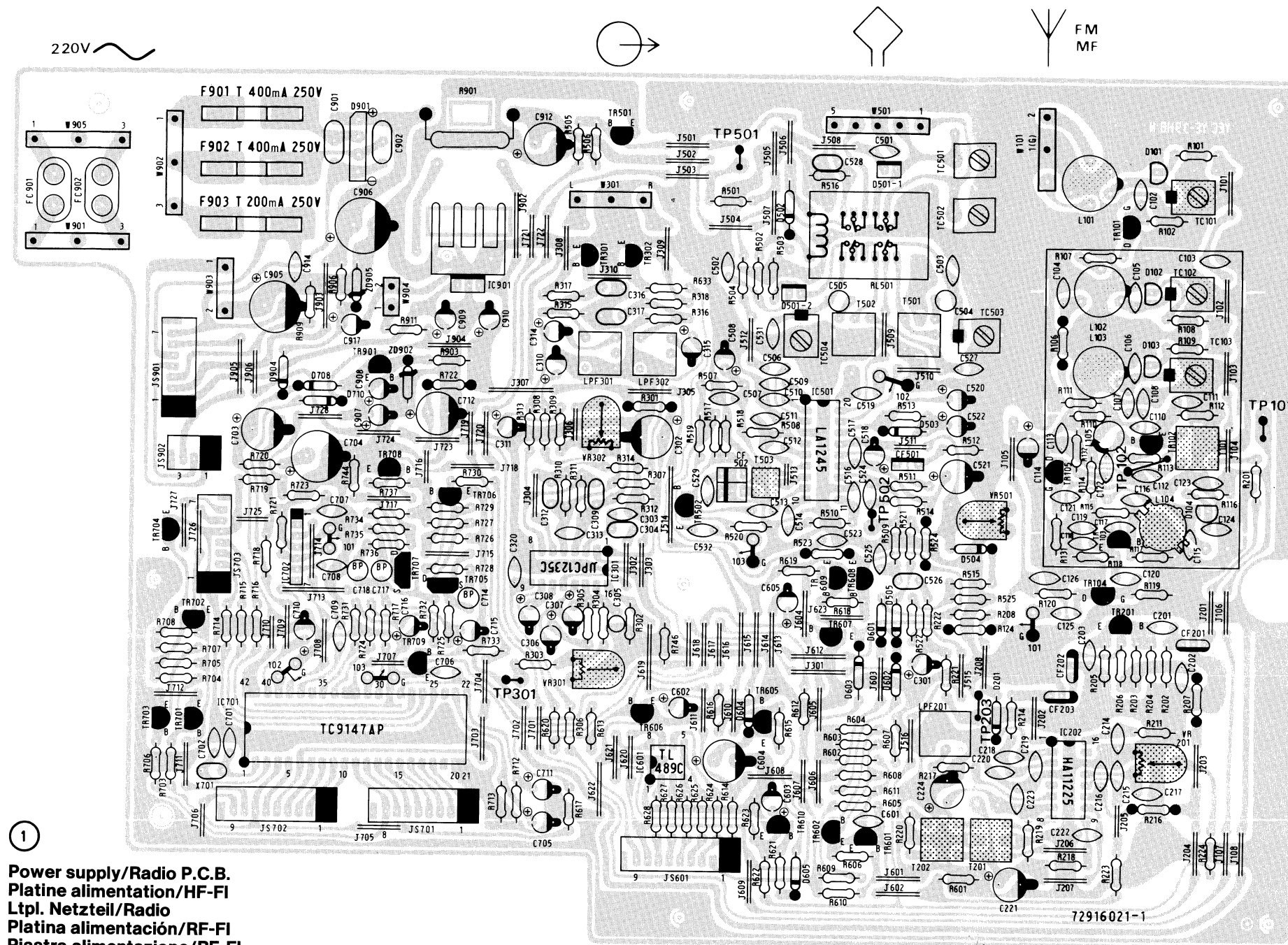


**Tuner TU 991 984.154 H**

Technical data · Caractéristiques principales · Technische Daten Características del aparato · Dati tecnici			
<b>Type of set :</b> 3 band synthesizer tuner <b>Type d'appareil :</b> Récepteur de radiodiffusion à synthétiseur <b>Geräteart :</b> Tuner, 3 Wellenbereiche mit Synthesizer <b>Tipo de aparato :</b> Sintonizador estereofónico con sintetizador <b>Tipo d'apparecchio :</b> Radioricevitore 3 gamme d'onda con sintetizzatore	350 mm 70 mm 260 mm 3,6 kg		
<b>Power supply and consumption :</b> <b>Alimentation et consommation :</b> <b>Stromversorgung und Leistungsaufnahme :</b> 220 V ~ 8 W <b>Alimentación y consumo :</b> <b>Alimentazione i consumo :</b>	<b>FM-MF :</b> 87,5 - 108 MHz <b>FM-IF :</b> 10,7 MHz <b>MW-PO :</b> 522 - 1 611 kHz <b>LW-GO :</b> 153 - 360 kHz <b>AM-IF :</b> 450 kHz		
<b>Sensitivity :</b> FM-MF mono : 0,8 µV (S/N = 26 dB, ± 40 kHz) <b>Sensibilité :</b> FM-MF stereo : 30 µV (S/N = 46 dB, ± 40 kHz) <b>Eingangsempfindlichkeit :</b> FM-MF stereo : 30 µV (S/N = 46 dB, ± 40 kHz) <b>Sensibilidad :</b> MW-PO : 250 µV/m (S/N = 20 dB) <b>Sensibilita :</b> LW-GO : 600 µV/m (S/N = 20 dB)	<b>Selectivity :</b> FM-MF : 65 dB (± 300 kHz) <b>Sélectivité :</b> FM-MF : 65 dB (± 300 kHz) <b>Trennschärfe :</b> AM-MA : 40 dB (± 9 kHz) <b>Selectividad :</b> AM-MA : 40 dB (± 9 kHz) <b>Selettività :</b> AM-MA : 40 dB (± 9 kHz)		
<b>Total harmonic distortion :</b> <b>Distorsion harmonique :</b> FM-MF : 0,15% <b>Klirrfaktor :</b> AM-MA : 1,5% <b>Distorsión armonica :</b> <b>Distorsione armonica :</b>	<b>Frequency response :</b> FM-MF : 20 Hz - 15 kHz <b>Courbe de réponse :</b> FM-MF : 20 Hz - 15 kHz <b>Frequenzgang :</b> MW-PO : 50 Hz - 2,5 kHz <b>Curva de respuesta :</b> LW-GO : 50 Hz - 1,5 kHz <b>Curva di riposta :</b>		
<b>Stereo separation :</b> <b>Diaphonie :</b> <b>Übersprechdämpfung :</b> 40 dB f = 1 kHz <b>Diafonia :</b> <b>Diafonia :</b>	<b>S/N ratio :</b> 70 dB (40 kHz - 1 mV) <b>Rapport S/B :</b> 70 dB (40 kHz - 1 mV) <b>Geräuschspannungsabstand :</b> 70 dB (40 kHz - 1 mV) <b>Relación señal/ ruido :</b> 70 dB (40 kHz - 1 mV) <b>Rapporto segnale/disturbo :</b>		

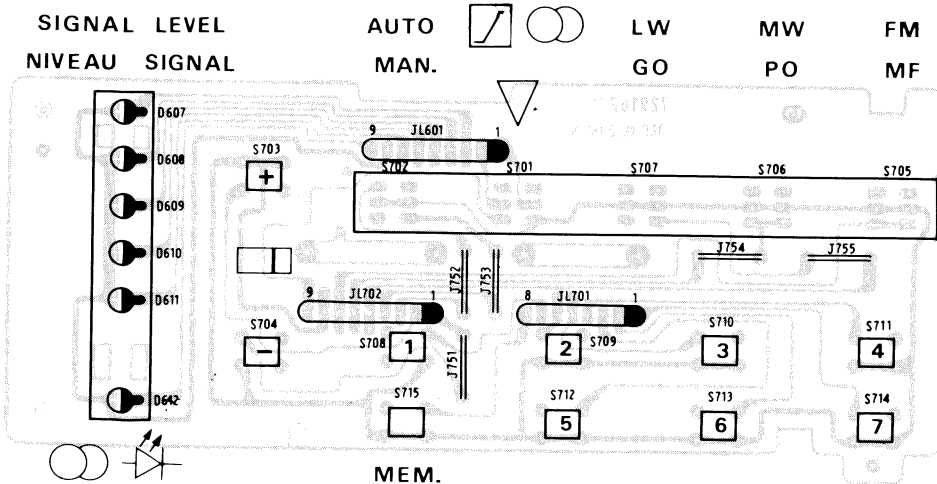
**NORDMENDE**





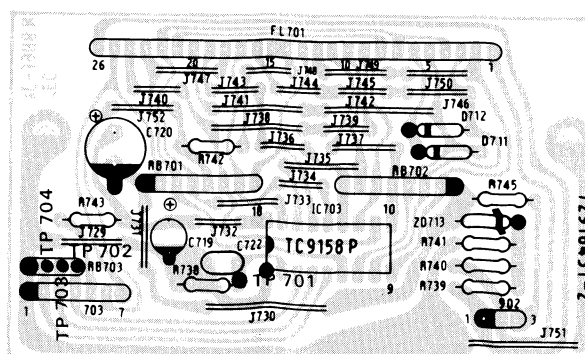
1

P.C.B. Pretuning  
Platine présélection  
Ltpl. Festsendereinstellung  
Platina preselección  
Piastra di preselezione

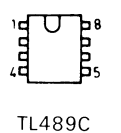
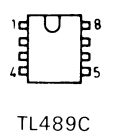
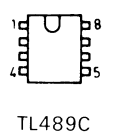
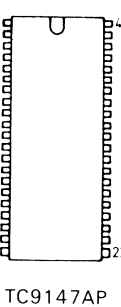
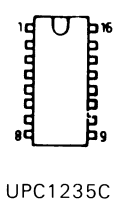
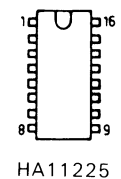
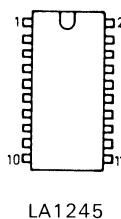
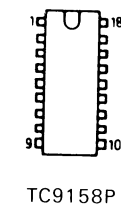


3

Frequency Display P.C.B.  
Platine afficheur  
Ltpl. Frequenzsyntheseanzeige  
Platina indicador de Frecuencia  
Piastra indicatore di Frequenza



Component side  
Côté composants  
Bestückungsseite  
Lado componentes  
Lato componenti

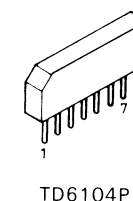


1	0	10	FM.MWO,2 LW - 4.5
2	2.5	11	FM.MWO,2 LW - 9.3
3	0	12	FMO,2 MW - 14.3 LW - 4.5
4	0	13	FM.LW - 15.3 MW - 15.6
5	0	14	FM.LW - 15.3 MW - 15.6
6	FM - 4.6 MW - 9.5 LW - 9.3	15	FM.LW - 15.3 MW - 15.6
7	FM - 9.2 MW - 14.3 LW - 4.5	16	FM.LW - 15.3 MW - 15.6
8	FM - 9.2 AM - 14.2	17	FM.LW - 15.3 MW - 15.6
9	FM4.8 MW - 14.4 LW - 4.5	18	5.1

1	MW2,6 LW4	11	0.7
2	MW2,3 LW2,2	12	0
3	2.8	13	3
4	0	14	10.1
5	MW9,2 LW8,9	15	1.4
6	2.1	16	MW8,7 LW7,6
7	9.4	17	MW3 LW2,9
8	9.4	18	5.5
9	2.8	19	5.5
10	MW7,8 LW7,9	20	2.7

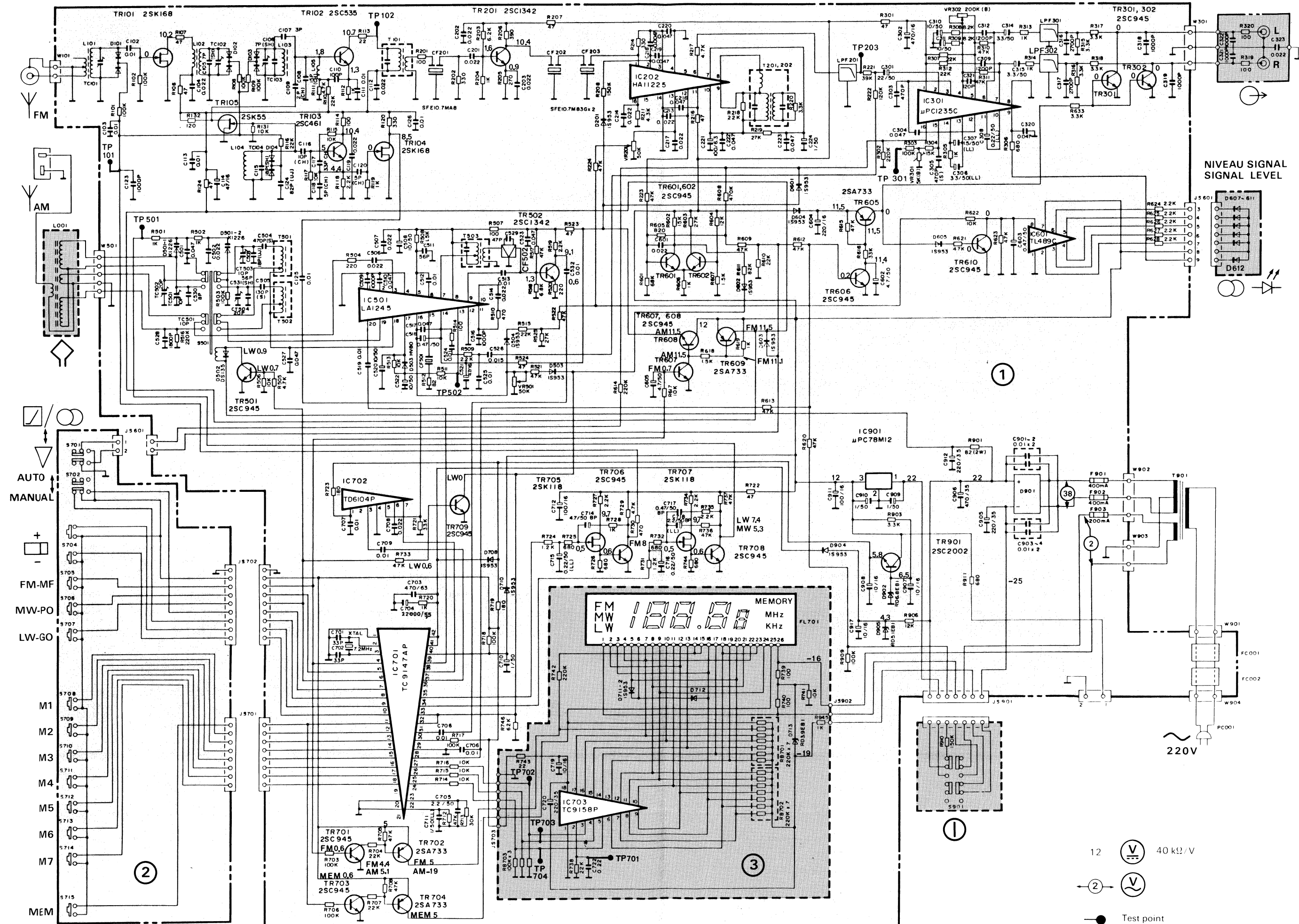
1	FM1,9 AM2,6	9	5.6
2	FM1,9 AM3,1	10	5.6
3	FM1,9 AM2,6	11	FM10,6 AM10,9
4	0	12	FMO,2 AM4,9
5	-	13	FM3,8 AM0,2
6	5.6	14	0
7	FM5,6 AM6,4	15	-
8	5.6	16	3.4

1	10,9	9	FM10,1 AM10,8
2	2,4	10	2,4
3	5,2	11	2,4
4	8,8	12	2,4
5	8,8	13	2,4
6	4,4	14	2,4
7	4,4	15	FM3,2 AM 0,3
8	0	16	FMO,2 AM10,2





















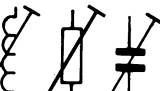



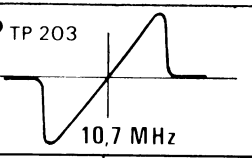







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2	-
3	FM3,9 AM4,2
4	0
5	3,4
6	3,5
7	FM2,9 AM0



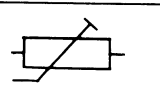



1	0	11	0	21	0	31	FM5 AM2,3	41	5,2
2	2,1	12	0	22	0	32	FM4,4 MW4,7	42	5,2
3	2,1	13	0	23	0	33	FM4,4 MW4,7		
4	FM4,6 AM0	14	0	24	-	34	0,5		
5	FM.LWO MW4,8	15	0	25	0	35	0,5		
6	FM.MWO LW4,6	16	0	26	0	36	-		
7	FM 5 AM 5,1	17	0	27	0	37	FM2,1 AM5		
8	0	18	0	28	0	38	FM2,8 AM0		
9	0	19	-	29	0	39	FM5 AM2,1		
10	0	20	0	30	5,1	40	5,1		



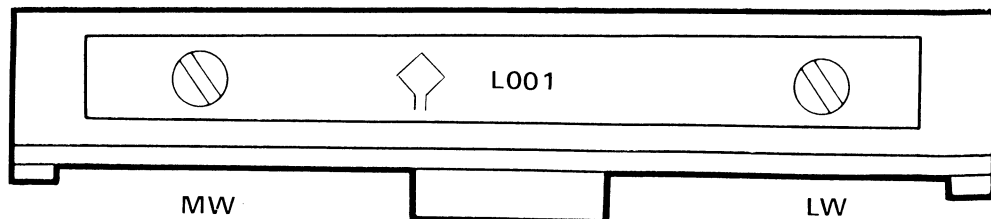


AM Alignment						
		30% mod. 1 kHz 	f			
IF	1	$V_e \approx 10 - 100 \text{ mV}$	450 kHz		T 503	TP 502 Max
MW	2			522 kHz 	T 501	TP 501 1.0 V
	3			 1 611 kHz	TC 503	8.0 V
PO	4	$V_e \approx 500 \mu\text{V/m}$	603 kHz	603 kHz 	L 001 - MW	Max
	5		1 404 kHz	 1 404 kHz	TC 501	
LW	6			153 kHz 	T 502	TP 501 1.0 V
	7			 360 kHz	TC 504	8.0 V
GO	8	$V_e \approx 500 \mu\text{V/m}$	160 kHz	160 kHz 	L0 01 - LW	Max
	9		320 kHz	 320 kHz	TC 502	
	10	$V_e = 1 \text{ mV}$ 	900 kHz	900 kHz 	VR 501	D 607 ~ 611  ON

FM Alignment						
			f			
IF	1	 > 10 mV	10,7 MHz		T 101	TP 203 Max
FI	2				T 201	TP 203 
ZF	3				T 202	
		TP 102				
FM	4			87,5 MHz 	L 104	TP 101 2.0 V
	5			 108 MHz		< 9 V
MF	6	 $V_e \approx 500 \mu\text{V/m}$	90 MHz	90 MHz 	L 101 ~ L 103	Max
	7		106 MHz	 106 MHz	TC 101 ~ TC 103	
	8	$V_e = 1 \text{ mV}$	98 MHz	98 MHz 	VR 201	D 607 ~ 611  ON

Decoder Alignment						
		 $\Delta f = 22,5 \text{ kHz}$	f			
	1	1 mV stéréo	98 MHz	98 MHz 	VR 301	TP 301 f = 76 kHz
	2		98 MHz	98 MHz 	VR 302	Max Separation

REPEAT ALIGNMENT / REPETER CES REGLAGES / ABGLEICH WIEDERHOLEN / REPETIR ESTOS REGLAJES / RIPETERE TARATURE



## Deutschland

### NORDMENDE Vertriebs-GmbH & Co. OHG

2800 **Bremen 44**  
Technischer Kundendienst  
und Ersatzteilwesen  
Funkschneise 5-9  
Tel.: 04 21 / 45 85-1

**NORD**  
2000 **Hamburg 20**  
Zweigniederlassung Nord  
Hoheluftchaussee 38  
Tel.: 0 40 / 42 10 80

1000 **Berlin 15**  
Zweigniederlassung Nord  
Verkaufsbüro Berlin  
Kurfürstendamm 182 - 183  
Tel. 0 30 / 88 40 21

2800 **Bremen 44**  
Zweigniederlassung Nord  
Verkaufsbüro Bremen  
Funkschneise 13  
Tel.: 04 21 / 45 60 42

3012 **Langenhagen 7**  
Zweigniederlassung Nord  
Verkaufsbüro Hannover  
Berliner Allee 2/4  
Tel.: 05 11 / 7 40 00-0

**WEST**  
4300 **Essen 12**  
Zweigniederlassung West  
Teilungsweg 29  
Tel.: 02 01 / 3 19 31

4600 **Dortmund**  
Zweigniederlassung West  
Verkaufsbüro Dortmund  
Olpe 16  
Tel. 02 31 / 52 84 07/09

4000 **Düsseldorf 1**  
Zweigniederlassung West  
Verkaufsbüro Düsseldorf  
Adlerstraße 32  
Tel. 02 11 / 36 20 40 / 48 / 49

5000 **Köln 1**  
Zweigniederlassung West  
Verkaufsbüro Köln  
Bonner Wall 27  
Tel.: 02 21 / 37 20 27/29

**RHEIN-MAIN**  
6057 **Dietzenbach-Steinberg**  
Zweigniederlassung Rhein-Main  
Karl-Benz-Straße 1  
Tel.: 0 60 74 / 4 06-0

3501 **Kassel-Fuldabrück 1**  
Zweigniederlassung Rhein-Main  
Verkaufsbüro Kassel  
Ostring 34  
Tel. 05 61 / 58 20 51 / 52

6800 **Mannheim-Neckarau**  
Zweigniederlassung Rhein-Main  
Verkaufsbüro Mannheim  
Fleißwörthstraße 31-33  
Tel. 06 21 / 85 30 94

8500 **Nürnberg-Langwasser**  
Zweigniederlassung Rhein-Main  
Verkaufsbüro Nürnberg  
Lübener Straße 26-28  
Tel. 09 11 / 8 02 46

6600 **Saarbrücken**  
Zweigniederlassung Rhein-Main  
Saargemünder Straße 89a  
Tel.: 06 81 / 85 45 00

**SÜD**  
8000 **München 46**  
Zweigniederlassung Süd  
Heidemannstraße 166c  
Tel.: 0 89 / 31 63 41

7800 **Freiburg**  
Zweigniederlassung Süd  
Verkaufsbüro Freiburg  
Wöhlerstraße 11  
Tel.: 07 61 / 50 80 66

8400 **Regensburg**  
Zweigniederlassung Süd  
Verkaufsbüro Regensburg  
Donaustauer Straße 172  
Tel. 09 41 / 4 70 42 / 43

7022 **Leinfelden-Echterdingen 2**  
Zweigniederlassung Süd  
Verkaufsbüro Stuttgart  
Max-Eyth-Straße 3  
Tel. 07 11 / 79 70 35-39

## Europa

**Andorra**  
AFE-IMPORT / ANDIMESA  
4, Plaza d'Andorra  
Andorra - La Vella

**Belgien**  
RADELCO N.V.  
Italiëlei 179  
B-2000 Antwerpen

**Dänemark**  
K. K. Skjød & Co. A.P.S.  
Artillerivej 90  
2300 København S

**England**  
European Electronics Corp. Limited  
Units 8 and 9  
Faraday Road - Rabans Lane  
Aylesbury Bucks HP 19 3 RY

**Finnland**  
FINNMEDE OY  
Takkatie, 10  
SF-00370 Helsinki 37

**Frankreich**  
STEV (Service Télévision)  
63 A, rue d'Illzach  
68100 Mulhouse

**Frankreich**  
SRAMEE  
12, Avenue de l'Yser  
78800 Houilles

**Griechenland**  
TEVELLAS-NORDMENDE A.B.E.  
Lamia National Road  
Athen

**Irland**  
Reynolds Electronics Ltd.  
Finnabair Industrial Park  
Dundaik Co. Louth  
Irland

**Island**  
RADIO BUDIN  
Klapparstíg 26  
Reykjavík

**Italien**  
S.E.I.  
Via Emilia 52-54  
40064 Ozzano Emilia/Bologna

**Kanarische Inseln/Spainien**  
COMERCIAL BOLSUR S.L.  
Apartado 784  
Santa Cruz de Tenerife  
Islas Canarias/ESPANA

**Luxemburg**  
LESSEL FRERES  
21, rue Philippe II  
Luxembourg

**Niederlande**  
KOELRAD B.V.  
Maalderij 19  
1185 ZB Amstelveen

**Norwegen**  
FRIGO NORSK, John Bryhn  
Bjørnstjerne, Bjørnsonsgate 60  
3000 DRAMMEN

**Österreich**  
SDN Unterhaltungselektronik  
Vertriebsges.m.b.H.  
Laudongasse 29  
A-1080 Wien

**Portugal**  
MADUREIRA & SOARES Lda.  
Rua Sa da Bandeira 610  
Porto

**Schweden**  
SDN Distribution AB  
Frövingegatan 14  
Box 2044  
S-421 02 Västra Frölunda

**Schweiz**  
SEYFFER & CO. AG  
Haus zur Europabrücke  
Hohlstraße 550  
8048 Zürich

**Spanien**  
Rápida, S. A.  
Rambla Cataluña, 7-9  
Barcelona (7)

**Türkei**  
Bekoteknik Sanayi A. S.  
Karaagac Cadd. 2/4  
Sütlüce-Istanbul

**Zypern**  
Moneta General Enterprises Ltd.  
P.O. Box 3969  
Nicosia, Zypern

## Übersee

**Ägypten**  
A.O.I. - Arab Organization  
for Industrialization  
P.O. Box 84  
Heliopolis - Cairo Egypt

**Ägypten**  
Salem Ouda Salem  
NORDMENDE Service Center  
56 b Damascus Street  
Mohandesin City - Cairo

**Algerien**  
Messrs. SO.NA.CAT  
Direction de la Maintenance  
87, Boulevard Mohamed V  
Alger

**Australien**  
J.B.C. Nordmende  
99-105 Queensbridge street  
South Melbourne 3205  
Victoria, Australia

**Hongkong**  
Forward Intern. Corp. Ltd.  
RMS. 2801-4  
International Building  
141, Des Voeux Road Central  
Hongkong

**Indonesien**  
P.T. Central Intone Intern. Ltd.,  
P.O. Box 737, Jakarta

**Irak**  
Iraqi Trading Company  
P.O.B. 17, Bagdad

**Jordanien**  
JSSA MURRAD & SONS & CO.  
Mezdar Street  
P.O. Box 6549, Amman

**Kenya**  
BS Mohindra & Co. Ltd.  
Mfangano Street, Avon House  
P.O. Box 41832, Nairobi

**Kuwait**  
Maseelah Trading Comp. W.L.L.  
Canada-Dry-Street,  
Shuwaikh Kuwait

**Libanon**  
TELETRADE S.A.R.L.  
516 Corniche du Fleuve  
P.O. Box 11-0125  
Beirut

**Libyen**  
THE GENERAL ELECTRONICS CO.  
P.O. Box 2068  
Benghazi

**Malaysia**  
Wah Chang Intern. Corp.  
P.O. Box 6540 Kg. Tunku  
Selangor

**Nigeria**  
Universal Electronics  
17/19, Abebe Village Rd. Iganmu  
P.O. Box 2391  
Lagos

**Pakistan**  
Associated Electronics Ltd.  
7, Egerton Road  
P.O.B. 353  
Lahore

**Saudi Arabien**  
MAHMOOD SALEH ABBAR  
P.O. Box 461  
Jeddah

**Singapore - 7**  
Forward International  
Singapore (Private) Limited  
177 F. Selegie Complex  
Selegie Road

**Sri Lanka**  
Shamim Group Limited  
145, Kynsey Road  
P.O. Box 1802  
Colombo

**Sudan**  
Sheet Metal Industries Ltd.  
P.O. Box 112  
Khartoum

**Thailand**  
Vanich NORDMENDE Part,  
277, Rachdamri Road,  
Bangkok Plaza Centre

**Tunesien**  
Société Générale  
d'Electronique  
2, Rue Charles de Gaulle  
Tunis

**Uruguay**  
Plisol S.A.  
Avda. D. Fernandez  
Crespo 2117  
Montevideo

**Vereinigte Arabische Emirate**  
Allied Electronics Ltd.  
P.O. Box 4418 / Dubai  
General Enterprises Co.  
P.O.B. 289  
Abu Dhabi

**NORDMENDE**

SERVICE-CENTER